

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Pending Claims:

1. (Currently amended): A communication system having a spreader for spreading a data signal comprising at least a plurality of data symbols; the system assigning at least one of a plurality of spreading codes where at least one of said plurality of spreading codes is complex, the spreader characterized by:

a data input for receiving said data symbols;

a control input, for receiving an assigned spreading factor for the data signal;

a processor for defining a group of symbols for spreading based upon said assigned spreading factor;

an intermediate code generator for computing a spreading code based upon said assigned spreading factor and at least one code from a plurality of real codes derived from said plurality of assigned spreading codes, said intermediate code generator outputting an intermediate code; and

a rotator for performing a phase rotation of each symbol in said group to generate a complex quantity, said complex quantity being spread with said intermediate code and output as a spread data signal.

2. (Currently amended): The system of claim 1 wherein said [group N] processor defines said group using the relationship:

$$N = \frac{SF_{\max}}{SF}$$

where N is a real number denoting [denotes] the number of data symbols in said group, SF_{max} denotes the maximum spreading factor of the communication system and SF is the assigned spreading factor of the data signal.

3. (Original): The system of claim 2 wherein the amount of said phase rotation performed by said rotator is dependent upon the total number of assigned spreading codes.

4. (Original): The system of claim 2 wherein said plurality of assigned spreading codes is further characterized by both channelization codes and scrambling codes.

5. (Original): The system of claim 4 further characterized by said channelization codes including complex and real codes and said scrambling codes including complex and real codes.

6. (Original): The system of claim 5 wherein the amount of said phase rotation by said rotator is dependent upon the total number of complex channelization and complex scrambling codes assigned.

7. (Original): The system of claim 6 wherein said phase rotation is further characterized by $j^{(total\ number\ of\ complex\ codes)\ modulo\ 4}$ where a remainder of 0 results in 0 degrees of rotation, a remainder of 1 results in 90 degrees of rotation, a remainder of 2 results in 180 degrees of rotation and a remainder of 3 results in 270 degrees of rotation.

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Currently amended): A method of spreading a data signal comprising a plurality of data symbols for transmission in a communication system assigning at least one of a plurality of spreading codes, where at least one of the assigned spreading codes from the plurality of spreading codes is complex, the method characterized by the steps of:

- (a) computing a spreading factor;
- (b) defining a group of ~~said~~ symbols for spreading based upon said spreading factor;
- (c) generating a plurality of real codes corresponding to said plurality of spreading codes;
- (d) generating an intermediate code based upon said spreading factor and at least one of said plurality of real codes;
- (e) rotating each of said symbols of said group to generate a complex spreading code; and
- (f) mixing said complex spreading code with said intermediate code to generate an output spreading code.

15. (Currently amended): The method according to claim 14 wherein said defining step is further characterized by the step of deriving the size of said group using the formula:

$$N = \frac{SF_{\max}}{SF}$$

where N is a real number denoting [denotes] the number of data symbols in a group, SF_{max} denotes the maximum spreading factor of the communication system and SF is the computed spreading factor.

16. (Currently amended): The method according to claim 15 wherein ~~said~~ the rotating step is further characterized by differing degrees of rotation in dependence upon the number of complex spreading codes ~~from said~~ assigned codes.

17. (Original): The method according to claim 16 wherein said rotating step is further characterized by the steps of:

(d1) rotating 0 degrees when $j^{(total\ number\ of\ complex\ codes) \bmod 4}$ remainder is 1;

(d2) rotating 90 degrees when $j^{(total\ number\ of\ complex\ codes) \bmod 4}$ remainder is j ;

(d3) rotating 180 degrees when $j^{(total\ number\ of\ complex\ codes) \bmod 4}$ remainder is 1;

and

(d4) rotating 270 degrees when $j^{(total\ number\ of\ complex\ codes) \bmod 4}$ remainder is j .

18. (Currently amended): The method according to claim 17 whereinby said plurality of signal spreading codes is further characterized by channelization codes and scrambling codes.

19. (Currently amended): The method according to claim 18 whereinby said channelization ~~characterization~~ codes further include [including] complex channelization codes and said scrambling codes further include complex scrambling codes.

20. (Currently amended): The method according to claim 19 further characterized by the step of summing said number of complex channelization codes and complex scrambling codes ~~from said assigned codes~~.